

July 5, 1995

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NRO

Alaska Department of Environmental Conservation  
Northern Regional Office  
610 University Ave.  
Fairbanks, Alaska 99709-3643

Attn: Mr. Steve Bainbridge

**RE: STATUS REPORT, KOYUKUK CORRECTIVE ACTION, KOYUKUK, ALASKA  
NRO FILE #830.38.001**

Shannon & Wilson, Inc. has completed the tasks outlined in our Corrective Action Work Plan, dated June 1994, under our term Cleanup Contract #18447191 (NTP No. 18447191027A) with Alaska Department of Environmental Conservation (ADEC). This letter presents a summary of soil capping activities in the area to the north of the Koyukuk School building, and results of a water sample collected from the Village Safe Water Well.

The scope of this Corrective Action Plan included the placement of a bentonite seal around the Village Safe Water Well, the placement of a new cover on the contaminated soil stockpile, the placement of a soil cap over diesel contaminated soil in the area of the Koyukuk School, and the collection of water samples from the Village Safe Water Well. The original scope included the collection of soil samples from the soil stockpile for analytical testing, but after field screening indicated that the soil still probably contained concentrations of diesel range petroleum hydrocarbons which exceed the ADEC cleanup levels, Mr. Ben Thomas, of the ADEC Northern Regional Office, concurred that soil samples need not be collected.

#### Project Location

The village of Koyukuk is located at the confluence of the Koyukuk and Yukon Rivers in section 17, Township 7 South, Range 6 East, Kateel River Meridian, Alaska.

#### Background

Shannon & Wilson performed a release investigation at the site in December 1993, to evaluate the potential extent of soil contamination surrounding the school and in the vicinity of the Village

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Safe Water well such that remedial alternatives could be developed. The results of this work are presented in Shannon & Wilson's Release Assessment Report to ADEC dated May 1994. Recommendations presented in this report were used to develop the Corrective Action Work Plan dated June 1994.

In accordance with the corrective action plans, Shannon & Wilson coordinated the placement of a bentonite seal around the well in July 1994. The seal was placed after the removal of soil from around the Village Safe Water Well below the top of the permafrost boundary. The excavation was backfilled with clean fill materials similar to the surrounding soils. In addition, a new cover liner was placed over the existing contaminated soil stockpile and secured for long-term use. Prior to placing the new cover, field screening was conducted on the stockpiled soil. The results of field screening indicated that the soils contain levels of diesel range petroleum hydrocarbons which probably exceed the ADEC cleanup levels. A detailed description of the placement of the well seal and the cover placement is presented in Shannon & Wilson's report entitled *Interim Status Report, Koyukuk Corrective Action, Koyukuk, Alaska*, dated October 13, 1994.

#### Field Activities

On June 8, 1995, Mark Lockwood, a geologist with our firm, observed the placement of clean fill material over the diesel-contaminated surficial soils north of the Koyukuk School. The area covered is shown in Figure 1. The fill, which was purchased from the City of Koyukuk, was spread to a thickness of at least 6 inches using a bull dozer, which attempted to compact the soils as they were spread. The fill was loaded, transported, and spread by Koyukuk residents using City of Koyukuk equipment.

A water sample was collected from the Village well and was submitted to Boreochem Analytical Laboratories in Fairbanks, for analysis of volatile organic compounds (benzene, toluene, ethylbenzene, and xylenes [BTEX]) by EPA method 602. The sample was collected from the tap after the water was allowed to run for 5 minutes. The water passes through a chlorinator and fluorinator prior to the sample point.

The water sample was collected in two 40 ml VOA vials, preserved with hydrochloric acid, and filled such that no headspace remains in the containers. The analytical sample jars were placed

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in a cooler maintained at or near 4°C by "blue ice" during the field work and during shipment to the lab.

### Results

Analytical results indicate that the water sample collected from the Village Safe Water Well did not contain concentrations of BTEX compounds which exceeded the laboratory detection limits, or the current federal Maximum Contaminant Levels (MCL). A complete analytical report is presented in Appendix A.

### Conclusions

Based on the analytical sample results, Shannon & Wilson presents the following conclusions:

- ▶ ? The cover fill was successfully placed in accordance with the Corrective Action Plan.
  
- ▶ The results of analytical sampling of a sample collected from the Koyukuk Village Safe Water Well indicates that BTEX compounds are not present in concentrations exceeding the laboratory detection limits.

### Limitations

The data presented in this report should be considered representative at the time of our site visit. Changes in the observed conditions can occur with the passage of time, whether they be due to natural processes or from human activities on this or adjacent properties. In addition, changes in government codes, regulations, or law may occur. Due to such changes, or others beyond our control, our conclusions may need to be revised wholly or in part.

This letter was prepared for the exclusive use of the Alaska Department of Environmental Conservation and its representatives. If it is made available to others, it should be for information on factual data only and not as a warranty of conditions, such as those interpreted from our observations and presented in discussions included in this report.

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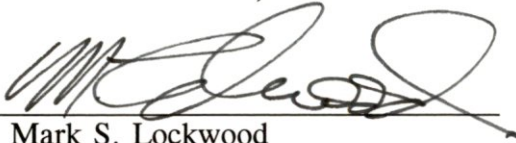
SHANNON & WILSON, INC.

We trust that this information is sufficient for your needs at the present time. If you have any questions, please do not hesitate to call.

Sincerely,

SHANNON & WILSON, INC.

By:



Mark S. Lockwood  
Geologist

Reviewed By:

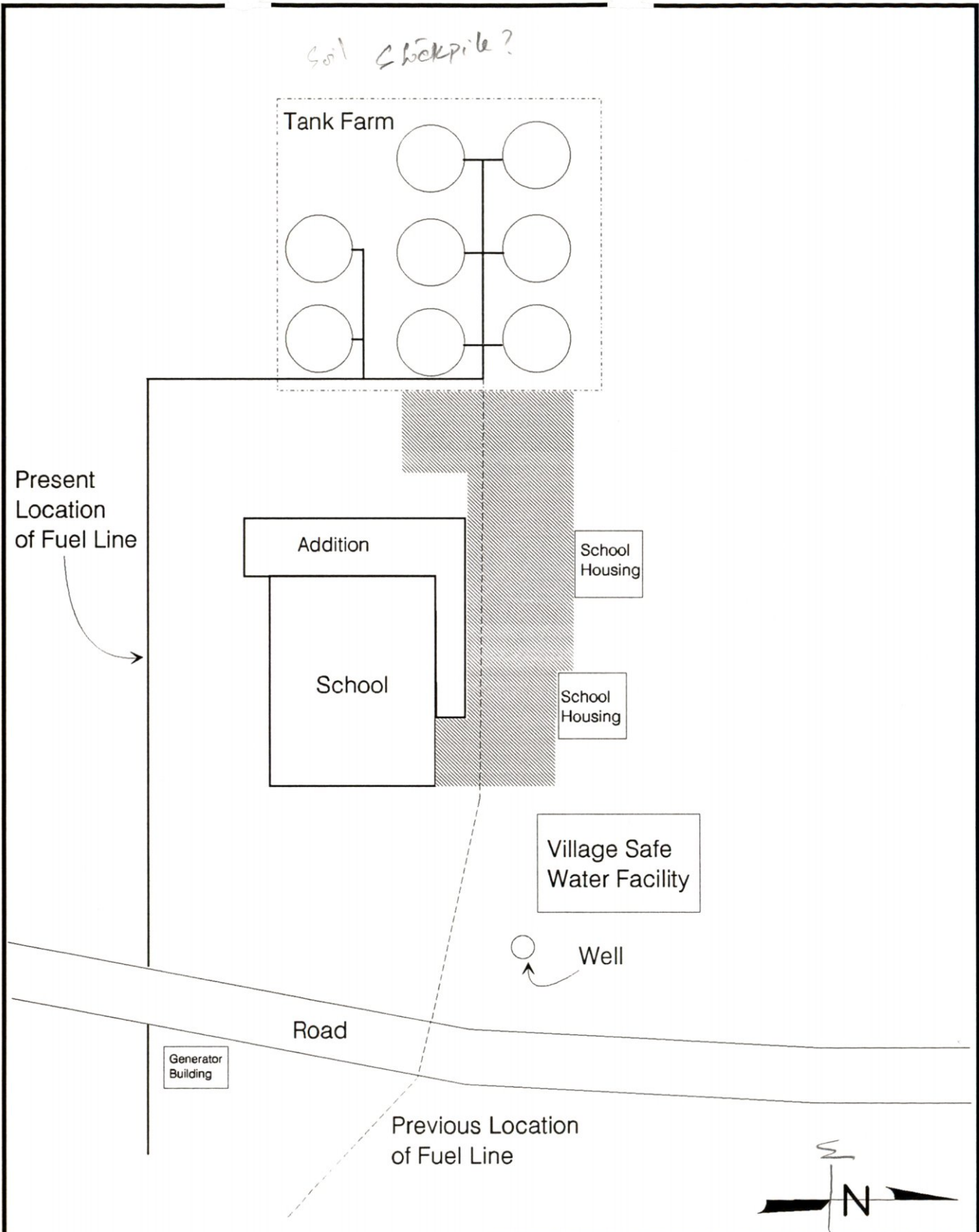


David McDowell  
Associate

MSL:DMM/sw

Enclosures: Figure 1. Fill Spreading Area  
Analytical Laboratory Report


Soil Checkpile?



**LEGEND**

 Approximate Area of Fill Spreading

APPROXIMATE SCALE  
1 INCH = 50 FEET

Corrective Action Koyukuk, Alaska	
FILL SPREADING AREA	
June 1995	X-0621-7
 SHANNON & WILSON, INC. Geotechnical Consultants	Figure 1